Console Setup

Connect the RS-232 console port to an ASCII data terminal or a PC with Widows serial Terminal mode of VT-100 (Hyper Terminal). To Start the Hyper-terminal, following the steps below:

Start "Hyper-terminal" program --

- On Windows 98 or Windows NT: start Tool Bar → Program → Accessory → Hyper Terminal Group → Double Click Hypertrm.exe → Enter Connection Name → Select Icon → Click OK

Select COM port to communicate with ATU-R100/R110/R200/R300/R110H

- Choose direct to COM1 or COM2 → click OK

Set Port Properties --

- Port Setting:
- **Bit per second: 9600**
- **Data bits: 8**
- **Stop bits: 1**
- **Parity bits: None**
- **Flow Control: None**
- Settings:
- Function, arrow, and ctrl keys act as: Windows keys
- Emulation: Auto-detect
- Back-scroll buffer lines: 500
- ASCII Setup:
- Echo typed characters locally
- Line delay: 0 milliseconds
- Character line feeds t incoming line ends: enable

Command Line Interface

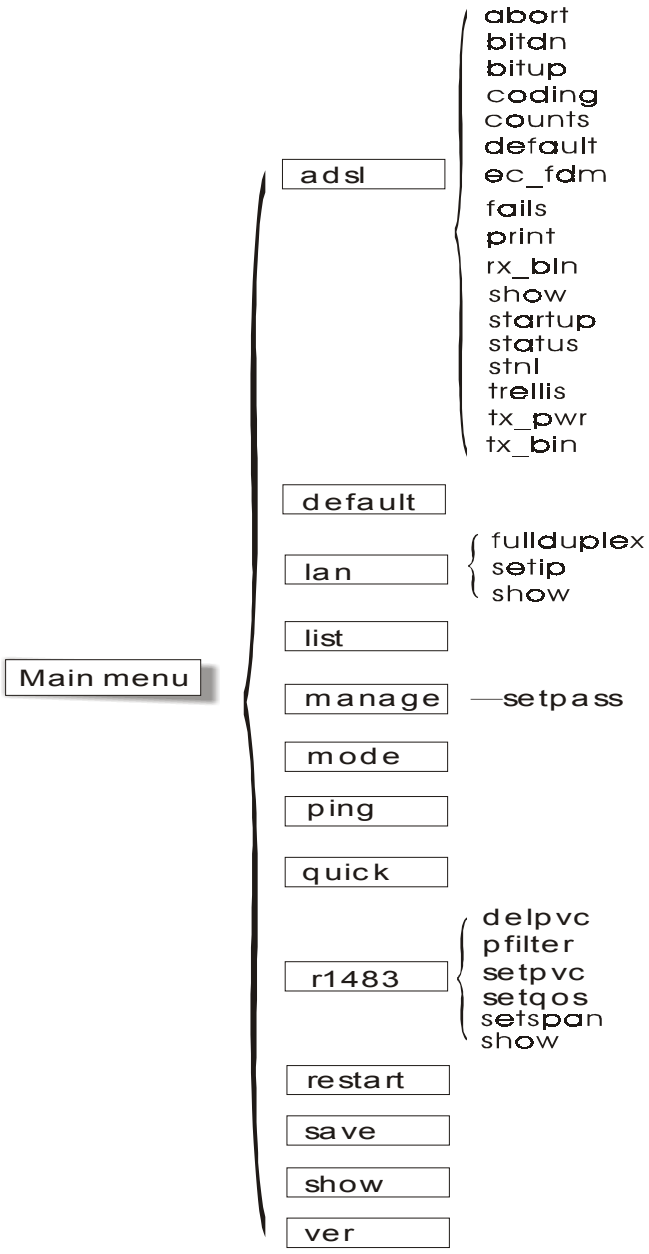
The command line interface allows you to change ADSL, ATM and Ethernet parameters, interchange between bridge and route mode by using the “mode” command, and display the status as well. Some commands must be followed by parameters for proper configuration to the modem, conventionally there shall be a “**space**” between a command and its corresponding parameters.

The punctuation marks in syntax and parameters section have their different meanings. In the syntax, **< >** mean the parameters enclosed in are **compulsory**, **[ ]** mean the parameter enclosed in are **optional**, and **|** between parameters mean **either….or**. In the parameters**, “ “** mean the parameters enclosed in are **Key Word.** Furthermore, after power on the unit with console terminal, screen will show the prompt as **ATUR110R>** for entering command without any password at first time.

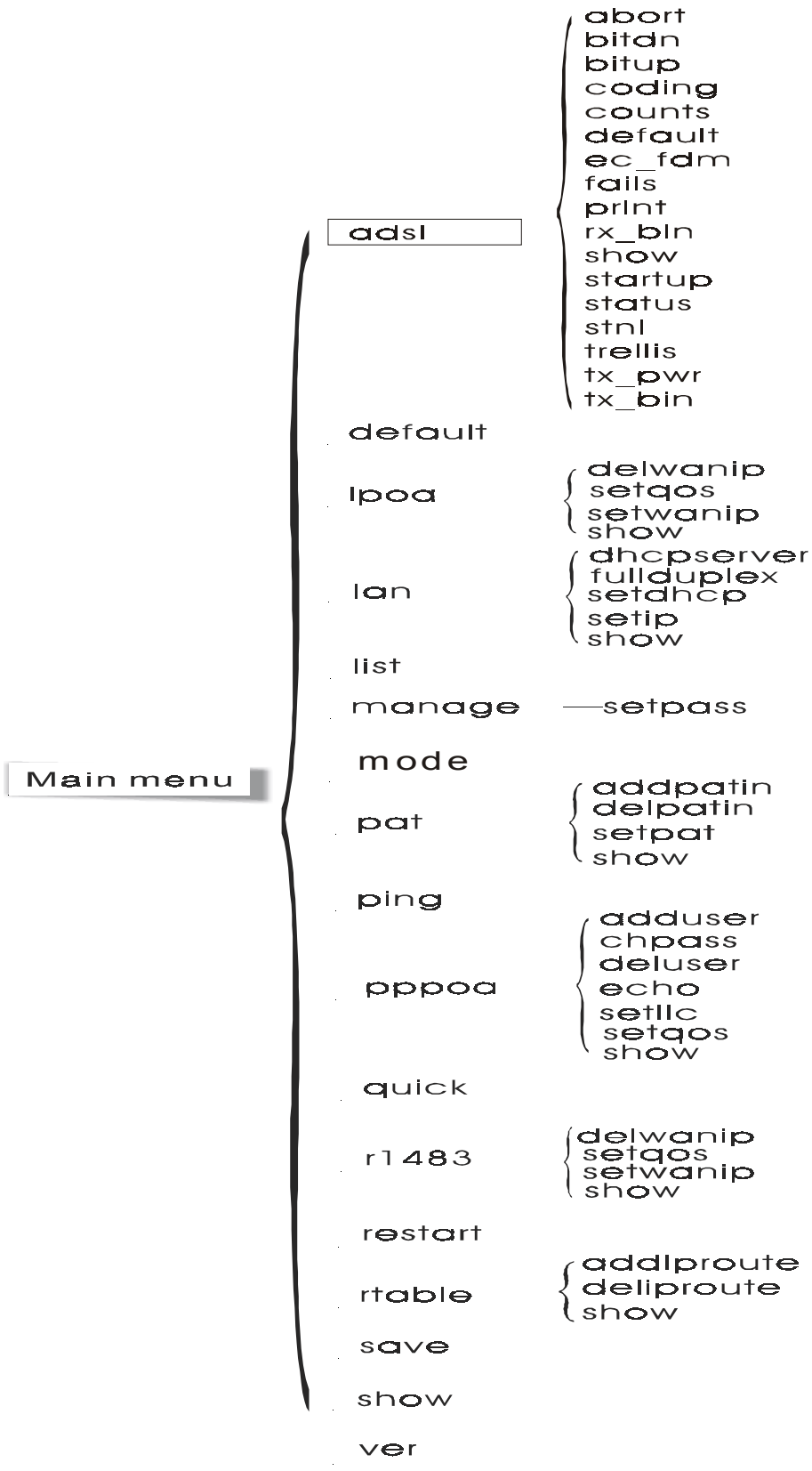
There are two hierarchical levels in the command line interface. The command tree below will show user the hierarchical relationship and commands supported:

Note 1: When the user enable password, the connection will time out after 10 minutes if no access to modem. Entering password again is necessary to resume connection.

Note 2: All settings will effect only after saved.



bridge mode command tree



router mode command tree

COMMAND LINE INTERFACE CONVENTIONS

Help help <command> home

HELP or ?

Lists all commands at the current level menu and follow by simple description of each command

Syntax:	help
Parameters:	

Example: > help

Syntax:	?
Parameters:	

Example: > ?

HELP <command> or ? <command>

Display the usage of particular command in each level.

Syntax:	help <command>
Parameters:	command: Enter each command

Example: adsl> help trellis

Display the syntax of trellis command

Response: trellis - <Enable>|<Disable> - Trellis encoding

Syntax:	? <command>
Parameters:	command: Enter each command

Example: adsl> help trellis

Response: Display the syntax of trellis command

trellis - <Enable>|<Disable> - Trellis encoding

HOME

Go back to the upper level menu

Syntax:	Home
Parameters:	

Example: > home

Bridge mode CLI

MAIN MENU COMMANDS:

adsl	default	lan	list
manage	mode	ping	quick
r1483	restart	save	show
ver			

ADSL

Enter to ADSL configuration menu. More commands under ADSL menu, see detail after.

Syntax:	adsl
Parameters:	

Example: > adsl

DEFAULT

Set all configuration to factory setting

Syntax:	Default
Parameters:	

Example: > default

Response: The data set to default successfully.

Set ADSL configuration back to factory setting.

LAN

Enter to LAN menu. More commands under LAN menu, see detail after.

Syntax:	Lan
Parameters:	

Example: > lan

LIST

Display the status for each enabled VC

Syntax:	List

Parameters:	

Example: > list

Response:
```
Port ethernet
  0:   Enabled      TxPkts: 1       RxPkts: 0/0
Port adsl
  0:   Enabled   TxPkts: 56          RxPkts: 37/0
                 TxVPI/VCI: 8/35     RxVPI/VCI: 8/35
```

Explanation: Information for Ethernet port:

0 (Status of port number 1)..……..….Enabled

TxPkts (transmitted packets)……..1

RxPkts (received packets)…..……0/0 (correct/error)

Information for ADSL port:

0 (Status of port number 1)…….enabled

TxPkts (transmitted packets)……56

RxPkts (received packets)……...37/0 (correct/error)

TxVPI/VCI (transmitted VC)……..……8/35

RxVPI/VCI (received VC)……..8/35

MANAGE

Enter to MANAGE configuration menu. More commands under MANAGE menu, see detail after.

Syntax:	manage
Parameters:	

Example: > manage

MODE

Select the modem as Bridge or router mode

Syntax:	mode
Parameters:	The default is bridge mode.

Example: > manage

Response:
```
Please select bridge or router:(b/r,r)b
Current mode is bridge
>
```

PING

Ping a specific IP address for testing purpose

Syntax:	ping <ipaddress>
Parameters:	ipaddress: IP address, in the format of 4 decimals separated by dots

Example1: > ping xxx.xxx.xxx.xxx

Response: ip: ping - reply received from xxx.xxx.xxx.xxx

Explanation: Successful ping

Example2: > ping 299.999

Response: Invalid IP

Explanation: Invalid IP address

Example3: > ping xxx.xxx.xxx.xxx

Response: ip: ping - no reply received

Explanation: Wrong IP address

If no reply received, the system will ping same IP address continually until the system receiving reply or pressing "Esc" to break.

QUICK

Enter a VC with RFC1483/bridge mode by an interactive user interface

Syntax:	quick
Parameters:	

Example: > quick

Response: 1 PVC existed, 7 PVCs available.

VPI(0-1023): 2**[Enter]**

VCI(1-65535): 34**[Enter]**

PCR(0-800): 800**[Enter]**

Packet Filter (Any/Ip/Pppoe): a**[Enter]**

Add another PVC ? (y/n): n**[Enter]**

Enable Spanning tree? (y/n) : y**[Enter]**

Configuration

MODE: Bridge

FUNCTION: R1483

Spanning Tree: Enable

#	VPI	VCI	PCR	Package filter
1:	1	22	800	ANY

Preserve the configuration (y/n): y**[Enter]**

Type "save" to effect setting.

R1483

Enter to R1483 menu. More commands under R1483 menu, see detail after.

Syntax:	R1483
Parameters:	

Example: > r1483

RESTART

Reboot the SDSL modem

Syntax:	restart
Parameters:	

Example: > restart

Response:
```
SDRAM size = 0x800000, type = 0x5
NPnNo boot information block
Booting...


System starts...

ADSL Line Establishing
>
```

SAVE

Save the configuration into flash memory, and restart modem

Syntax:	save
Parameters:	

Example: > save

Response:
```
Saving configuration...Configuration saved.
Updating flash filing system ...
SDRAM size = 0x800000, type = 0x5
NPnNo boot information block
Booting...


System starts...

ADSL Line Establishing
>
```

Save configuration then restart modem

SHOW

Display the configuration of each enabled VC and Ethernet

Syntax:	show [lan]|[wan]
Parameters:	“lan”: display LAN configuration
	“wan” display WAN configuration

Example 1: > show lan

Response:
```
Ethernet ip: 0.0.0.0
Subnet mask: 0.0.0.0
```

FullDuplex:Disabled

Explanation: Information for Local Ethernet IP, subnet mask and each enabled VC

Ethernet IP (local)……...0.0.0.0

Subnet mask……0.0.0.0

Full Duplex……Disabled

Function (Protocol in use)……RFC1483

Example 2: > show wan

Response:

FUNCTION	VPI/VCI	CLASS	PCR(KBits)	Spanning	Pkt Filter
Rfc1483	8/35	ubr	640	Disable	ANY

Explanation: VPI/VCI (Connected VC channel)……...8/35

CLASS (define QoS on the ATM network)……ubr

PCR (Peak Cell Rate)…..…… 640 (cells per second

Spanning (Spanning tree setting)……disable

Pkt Filter (packet control)..……Any (Allow to pass both IP and PPPOE packet.)

(Note: IP – only allow to pass IP packet; PPPoE – only allow to pass PPPoE packet)

VER

Display the software version number

Syntax:	Ver
Parameters:	

Example: > ver

Response: Version : 2.21MJ

(2.21MJ-H50.1302-F2210.0406A 28/Oct/2000 12:21)

ADSL MENU COMMANDS:

Abort	bitdn	bitup	coding
Counts	default	ec_fdm	fails
Print	rx_bin	show	startup
Status	stnl	trellis	tw_pwr
tx_bin			

ABORT

Terminate the ADSL physical link

Syntax:	abort
Parameters:	

Example: adsl> abort

BITDN

Display downstream bit loading values

Syntax:	bitdn
Parameters:	

Example 1: When ADSL line is connected:

adsl> bitdn

Response: Downstream Bit loading value:

0 1 2 3 4 5 6 7 - 8 9 A B C D E F

0
1
2
3
4
5
6
7
8
9
a
b
c
d
e
f

0 0 0 0 0 0 0 0 - 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 - 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 - 0 0 0 2 2 2 3 4
4 5 6 6 6 6 7 7 - 7 7 7 8 8 8 7 8
0 8 8 8 8 8 8 7 - 8 7 7 8 8 7 9 9
8 7 7 8 8 9 9 8 - 8 9 9 7 8 7 9 8
10 7 8 9 8 7 7 8 - 7 7 8 9 9 9 7 7
8 8 8 9 9 8 8 8 - 8 8 9 10 8 10 10 10
10 10 10 10 10 10 10 9 - 9 8 7 8 8 8 10 9
7 8 7 8 9 7 8 8 - 9 9 8 7 7 8 8 8
10 7 9 9 8 7 8 7 - 9 9 7 8 9 9 7 9
7 8 9 8 9 9 7 7 - 8 8 8 9 10 10 10 10
10 10 10 10 9 9 8 8 - 8 7 9 8 8 8 9 9
7 8 7 8 9 8 7 7 - 8 8 8 7 8 9 8 7
9 6 8 8 8 7 8 8 - 7 7 7 8 9 8 7 7
7 8 8 7 8 8 8 7 - 7 7 7 7 6 6 6 5

Example 2: When ADSL line is unconnected.

adsl> bitdn

Response: ADSL line is not ready!!

BITUP

Display upstream bit loading values

Syntax:	bitup
Parameters:	

Example 1: When ADSL line is connected:

adsl> bitup

Response: Upstream Bit loading value:

```
   | 0 1 2 3 4 5 6 7 - 8 9 A B C D E F
==+================================================
0| 2 0 0 0 0 0 0 0 - 0 0 0 0 0 0 0 0
1| 0 0 0 0 0 0 0 0 - 0 0 0 0 0 0 0 0
```

Example 2: When ADSL line is unconnected:

adsl> bitup

Response: ADSL line is not ready!!

CODING

Configure the ADSL coding gain from 0 dB to 6dB, or automatic.

Syntax:	coding <0>|<1>|<2>|<3>|<4>|<5>|<6>|<auto>
Parameters:	“0”,”1”,”2”,”3”,”4”,”5”,”6”: decimal value of dB
	“auto”: automatic coding gain

Example: adsl> coding 3

Configure coding gain to 3dB

COUNTS

Display ADSL counters (clean counter value after reset)

Syntax:	counts
Parameters:	

Example 1: When ADSL line is connected:

adsl> counts

Response:

Local_RSI_Counter	9	Local_RSF_Counter	0
Local_CRSI_Counter	2	Local_CRSF_Counter	0
Local_SEF_Couner	0	Local_LOS_Counter	0
Remote_RSI_Counter	0	Remote_RSF_Counter	0
Remote_CRSI_Counter	0	Remote_CRSF_Counter	0

Remote_SEF_Counter	0	Remote_LOS_Counter	0

Local_NCDI_Counter	0	Local_NCDF_Counter	0
Local_OCDI_Counter	0	Local_OCDF_Counter	0
Local_HECI_Counter	0	Local_HECF_Counter	0
Remote_NCDI_Counter	0	Remote_NCDF_Counter	0
Remote_HECI_Counter	0	Remote_HECF_Counter	0

Explanation:

Local_RSI_Counter: count of near-end Reed-Solomon forward error corrections for the interleaved data stream

Local_RSF_Counter: count of near-end Reed-Solomon forward error corrections for the fast data stream

Local_CRSI_Counter: count of CRC near-end anomalies for the interleaved data stream

Local_CRSF_Counter: count of CRC near-end anomalies for the fast data stream

Local_SEF_Couner: count of near-end severely errored frame defects

Local_LOS_Counter: count of near-end loss of signal defects

Remote_RSI_Counter: count of far-end Reed-Solomon forward error corrections for the interleaved data stream

Remote_RSF_Counter: count of far-end Reed-Solomon forward error corrections for the fast data stream

Remote_CRSI_Counter: count of CRC far-end anomalies for the interleaved data stream

Remote_CRSF_Counter: count of CRC far-end anomalies for the fast data stream

Remote_SEF_Counter: count of far-end severely errored frame defects

Remote_LOS_Counter: count of far-end loss of signal defect

ATM counters:
Local_NCDI_Counter: count of near-end no cell delineation for the interleaved data stream.

Local_NCDF_Counter: count of near-end no cell delineation for the fast data stream

Local_OCDI_Counter: count of near-end out of cell delineation for the interleaved data stream

Local_OCDF_Counter: count of near-end out of cell delineation for the fast data stream

Local_HECI_Counter: near-end header error check counter for the interleaved data stream

Local_HECF_Counter: near-end header error check counter for the fast data stream

Remote_NCDI_Counter: count of far-end no cell

delineation for the interleaved data stream.

Remote_NCDF_Counter: count of far-end no cell delineation for the fast data stream

Remote_HECI_Counter: far-end header error check counter for the interleaved data

Remote_HECF_Counter: far-end header error check counter for the fast data stream

Example 2: When ADSL line is unconnected:

adsl> counts

Response: ADSL line is not ready!!

DEFAULT

Set ADSL parameter back to factory setting

Syntax:	default
Parameters:	

Example: adsl> default

Response: Set ADSL configuration back to factory setting.

EC_FDM

Configure ADSL as Echo Cancellation mode or FDM mode

Syntax:	ec_fdm <Ec>|<Fdm>
Parameters:	Ec: Echo cancellation mode is selected
	Fdm: FDM mode is selected

Example: adsl> ec_fdm fdm

Select FDM mode

FAILS

Display ADSL error counts

Syntax:	fails
Parameters:	

Example 1: When ADSL line is connected:

adsl> fails

Response:

Overall_Failure	0	Local_Sef_Failure	0
Local_Los_Failure	0	Remote_Pow_Failure	0
Remote_Sef_Failure	0	Remote_Los_Failure	0

Local_ncdI_Failure	0	Local_ncdF_Failure	0
Local_lcdI_Failure	0	Local_lcdF_failure	0
Remote_ncdI_Failure	0	Remote_ncdF_Failure	0
Remote_lcdI_Failure	0	Remote_lcdF_Failure	0

Explanation: Overall_Failure: Non-zero value if any failures have occurred

Local_Sef_Failure: count of near-end severely error frames

Local_Los_Failure: count of near-end loss of signal
Remote_Pow_Failure: count of far-end dying gasp frames

Remote_Sef_Failure: count of far-end severely error framed

Remote_Los_Failure: count of far-end loss of signal

ATM failures:

Local_ncdI_Failure: count of near-end no cell delineation for the interleaved data stream

Local_ncdF_Failure: count of near-end no cell delineation for the fast data stream

Local_lcdI_Failure: count of near-end loss of cell delineation for the interleaved data stream

Local_lcdF_failure: count of near-end loss of cell delineation for the fast data stream

Remote_ncdI_Failure: count of far-end no cell delineation for the interleaved data stream

Remote_ncdF_Failure: count of far-end no cell delineation for the fast data stream

Remote_lcdI_Failure: count of far-end loss of cell delineation for the interleaved data stream

Remote_lcdF_Failure: count of far-end loss of cell delineation for the fast data stream

Example 2: When ADSL line is unconnected:

Response:
```
adsl> counts
ADSL line is not ready!!
```

PRINT

Display ADSL miscellaneous status

Syntax:	print
Parameters:	

Example 1: When ADSL line is connected:

Response:
```
adsl> print
ADSL Firmware version     ANNEX_A CPE 2210
OP state                  ShowTime
Last Failed Status        (0)
Start Progress            ad
```

Watchdog Timer	53
Down Stream Noise Margin	24 dB
Local Attenuation	0 dB
Remote Attenuation	31 dB
Coding Gain	6 dB
RS Frame TxCount	3249108
RS Frame RxCount	812277
00Cell TxCount	0
Cell RxCount	162

Example 2: When ADSL line is unconnected:

adsl> print

Response:

ADSL Firmware version	ANNEX_A CPE 2210
OP state	handshake
Last Failed Status	(0)
Start Progress	a0
Watchdog Timer	53

RX_BIN

*Allow the user to limit bin number used for special configurations in **receive** signal*

Syntax:	rx_bin <start_bin> <end_bin>
Parameters:	start bin: Start bin, the lowest bin number
	end bin: End bin, the highest bin number
	(1 to 255: decimal value of bin number)

Example: adsl> rx_bin 3 4

Set start bin = 3 and end bin = 4

SHOW

Display the ADSL parameter configuration

Syntax:	Show
Parameters:	

Example: adsl> show

Response:

ADSL setting :	Current	Ineffective
Local line code	MULTIMODE	MULTIMODE
Trellis encoding	Enable	Enable
EC/FDM mode	FDM	EC
Coding gain	AUTO	AUTO
Transmit Power Attenuation	0 dB	0 dB
Tx Start bin	6 (H)	6 (H)

Tx End bin	1f (H)	1f (H)
Rx Start bin	20 (H)	6 (H)
Rx End bin	ff (H)	ff (H)

Type "home" and then "save" to effect setting

Explanation: Ineffective: configuration setting that will become "current" only after **save and restart** this unit or **using startup command** that will malfunction after turning off this unit

Current: current status of ADSL line

STARTUP

Restart the ADSL link

Syntax:	startup
Parameters:	

Example: adsl> startup

Response: start to re-Sync. ...

ADSL Line Establishing

STATUS

Display the ADSL line status

Syntax:	status
Parameters:	

Example: adsl> status

Response:

Standard mode	T1_413		
Framing_Overhead_actual	0	Trellis	< Disable >
AS0_Dn_Bytes_Actual	0kbps		
AS0_Dn_Latency_Actual	< Interleave >		
LS0_Up_Bytes_Actual	0kbps		
LS0_Up_Latency_Actual	< Interleave >		
Fast_R_Up_Actual	0	Interleave_S_Up_Actual	0
Interleave_D_Up_Actual	0	Interleave_R_Up_Actual	0
Fast_R_Dn_Actual	0	Interleave_S_Dn_Actual	0
Interleave_D_Dn_Actual	0	Interleave_R_Dn_Actual	0

Explanation: Standard mode: ADSL coding Type at local side

Framing_Overhead_actual: Frame overhead type

Trellis: enable/disable trellis

AS0_Dn_Bytes_Actual: downstream speed of AS0

AS0_Latency_Actual: Interleave buffer or fast buffer of

AS0

LS0_Bytes_Actual: downstream speed of LS0

LS0_Latency_Actual: Interleave buffer or fast buffer of LS0

Fast_R_UP_Actual: Number of redundant bytes per Reed-Solomon code word for the fast buffer in the upstream direction

Interleave_S_UP_Actual: Number of DMT symbols per Reed-Solomon code word for the interleaved buffer in the upstream direction

Interleave_D_UP_Actual: interleaving depth in the upstream direction

Interleave_R_UP_Actual: Number of redundant bytes per Reed-Solomon code word for the interleaved buffer in the upstream direction

Fast_R_DOWN_Actual: Number of redundant bytes per Reed-Solomon code word for the fast buffer in the downstream direction

Interleave_S_DOWN_Actual: Number of DMT symbols per Reed-Solomon code word for the interleaved buffer in the downstream direction

Interleave_D_DOWN_Actual: interleaving depth in the downstream direction

Interleave_R_DOWN_Actual: Number of redundant bytes per Reed-Solomon code word for the interleaved buffer in the downstream direction

STNL

Configure the ADSL coding type at local side

Syntax:	stnl <T1.413>|<g.lite>|<g.dmt<|<Multi> (T1.413 Multi-Vendors)
Parameters:	“T1.413”: select T1.413 as coding type
	“g.lite”: select G.Lite as coding type
	“g.dmt”: select G.DMT as coding type
	“Multi”: T1.413 Multi-Vendors (auto detection)
Example:	adsl> stnl T
	Select T1.413 as the ATU-R200 coding type

TRELLIS

Enable/disable Trellis

Syntax:	trellis <Enable>|<Disable>
Parameters:	“Enable”: Enable trellis
	“Disable”: Disable trellis
Example:	adsl> trellis enable
	Enable trellis

TX_PWR

Configure transmitted power attenuation from 0dB to 12dB

Syntax:	tx_pwr <0>……<12>
Parameters:	0……12: 0 to 12, decimal value of dB
Example:	adsl> tx_pwr 11
	Configure transmitted power attenuation as 11 dB

TX_BIN

*Allow the user to limit bins used for special configurations in **transmit** signal*

Syntax:	tx_bin <start_bin> <end_bin>
Parameters:	start bin: Start bin, the lowest bin number
	end bin: End bin, the highest bin number
	(1 to 255: decimal value of bin number)
Example:	adsl> tx_bin 3 4
	Set start bin to 3 and end bin to 4

LAN MENU COMMANDS

fullduplex setip show

FULLDUPLEX

Enable or disable full duplex operation

Syntax:	fullduplex <disable>|<enable>
Parameters:	"disable": disable full duplex (half duplex operation)
	"enable": enable full duplex operation
	(The default is disable)
Example:	lan> fullduplex enable
	Enable full duplex operation

SETIP

Setup the IP address, and subnet mask for the Ethernet LAN connection

Syntax:	setip <etherip>[<subnet mask>]
Parameters:	etherip: Ethernet IP address, in the format of 4 decimals separated by dot
	subnet mask: Subnet mask, the default is 255.255.255.0
Example:	lan> setip 192.168.2.32
	Set a new IP address = 192.168.2.32 and
	Subnet mask is default = 255.255.255.0

SHOW

Display the current configuration of Ethernet setting.

Syntax:	Show
Parameters:	
Example:	lan> show
Response:	Ethernet ip: 0.0.0.0
	Subnet mask: 0.0.0.0
	FullDuplex:Disable
Explanation:	**Information for Local Ethernet IP, subnet mask**
	Ethernet IP (local)……...0.0.0.0
	Subnet mask……...0.0.0.0
	Full Duplex……..disable

MANAGE MENU COMMANDS

SETPASS

Change password

Syntax:	setpass
Parameters:	Up to 20 alphanumeric characters. Upper case and lower case are different numbers.
Example 1:	*For enabling a new password*
	manage> setpass
Response:	Password disabled
	New Password: ****
	Confirm password again: ****
	Password has been changed and will be effective only after save!
	Saving configuration...Configuration saved.
Explanation:	*You will be asked to key in new password and confirm the new password again.*
Example 2:	*For changing old password:*

manage> setpass

Response: Old Password: ****

New Password (press ENTER to disable): ****

Confirm password again: ****

Password has been changed

Saving configuration...Configuration saved.

Explanation: *You will be asked to key in old password. Type the new password and confirm the new password again.*

Example 3: *For disabling old password:*

manage> setpass

Response: Old Password: ********

New Password (press ENTER to disable):

Are you sure to disable password (y/n)?

The password has been disabled

Saving configuration...Configuration saved.

Explanation: *You will be asked to key in old password and press enter to disable old password and confirm it again.*

R1483 MENU COMMAND

delpvc	pfilter	setpvc	setqos
setspan	show		

DELPVC

*Disable VC by giving a VPI and VCI numbers defined by **setpvc** command previously*

Syntax:	delpvc <all>|[<vpi>/]<vci>
Parameters:	"all": delete all VC
	vpi: decimal value of VPI number, 0 to 1023
	vci: decimal value of VCI number, 1 to 65535

Example: r1483> delpvc

Disable VC in configuration setting

PFILTER

Packet filtering control on a specific VC

Syntax:	pfilter [<vpi>/]<vci> <any|ip|pppoe>
Parameters:	vpi: decimal value of VPI number, 0 to 1023.
	vci: decimal value of VCI number, 1 to 65535.
	(vpi, vci defined by setpvc command previously)

	“any”: Allow to pass both IP and PPPOE packet
	“ip”: only allow to pass IP packet
	“pppoe”: only allow to pass PPPoE packet

Example: r1483> pfilter 1/32 ip

Allow to pass IP packet only in a specific 1/32 VC

SETPVC

Enable an r1483 bridging VC by giving the VCI and VPI numbers

Syntax:	setpvc [<vpi>/]<vci> [pcr <pcr>]
Parameters:	vpi: decimal value of VPI number, 0 to 1023
	vci: decimal value of VCI number, 1 to 65535
	pcr: Peak Cell Rate, 0 to 800 cells per second, the default is 800 cells per second

Example: r1483> setpvc 1/32 pcr 600

Configure vpi=1, vci= 32, pcr=600

SETQOS

Configure each enabled VC in r1483 that should use UBR, CBR or VBR (define the Quality of Service on the ATM network), also set the speed of the ATM link in cells per second

Syntax:	setqos [<vpi>/]<vci> <ubr|cbr|vbr(nrt)> <pcr>
Parameters:	vpi: decimal value of VPI number, 0 to 4095.
	vci: decimal value of VCI number, 1 to 65535.
	(vpi, vci defined by setpvc command previously)
	“ubr”: Unspecified Bit Rate
	“cbr”: Constant Bit Rate
	“vbr”: Variable Bit Rate
	pcr: Peak Cell Rate, 0 to 800 cells per second

Example: r1483> setqos 1/32 ubr 640

Configure 1/32 VC using UBR and 640 cells per second for the connection.

SETSPAN

Enable or disable Spanning Tree under Bridge mode for all enabled VC

Syntax:	setspan <Enable>|<Disable>
Parameters:	“Enable”: enable spanning tree
	“Disable”: disable spanning tree

Example: r1483> setspan Disable

Disable spanning tree

SHOW

Display the configuration of r1483 bridge setting.

Syntax:	Show
Parameters:	

Example: r1483> show

Response:

FUNCTION	VPI/VCI	CLASS	PCR(KBits)	Spanning	Pkt Filter
Rfc1483	8/35	ubr	640	Disable	ANY

Explanation: **Information for RFC1483 bridge setting:**

Function (Protocol in use)……RFC1483

VPI/VCI (Connected VC channel)……...8/35

CLASS (define QoS on the ATM network)……ubr

PCR (Peak Cell Rate)……640 (cells per second)

Spanning (Spanning tree setting)……disable

Pkt Filter (packet control)……Any (Allow to pass both IP and PPPOE packet.)

(Note: IP – only allow to pass IP packet; PPPoE – only allow to pass PPPoE packet)

Router mode CLI

MAIN MENU COMMANDS

adsl	default	ipoa	lan
list	manage	mode	pat
ping	pppoa	quick	r1483
restart	Rtable	save	show
ver			

ADSL

Enter to ADSL configuration menu. More commands under ADSL menu, see detail after.

Syntax:	Adsl
Parameters:	

Example: ATUR110R> adsl

DEFAULT

Set all configuration to factory setting

Syntax:	Default
Parameters:	

Example: ATUR110R> default

Response: The data set to default successfully.

Set ADSL configuration back to factory setting.

IPOA

Enter to IPOA menu. More commands under IPOA menu, see detail after.

Syntax:	Ipoa
Parameters:	

Example: ATUR110R> ipoa

LAN

Enter to LAN menu. More commands under LAN menu, see detail after.

Syntax:	Lan
Parameters:	

Example: ATUR110R> lan

LIST

Display the status for each enabled VC

Syntax:	List
Parameters:	

Example: ATUR110R> list

Response:

```
Port ethernet
  0:  edd      TxPkts: 1      RxPkts: 0/0
Port adsl
  0:  ip  TxPkts: 56          RxPkts: 37/0  TxVPI/VCI:
                  8/35    RxVPI/VCI: 8/35
```

Explanation: Information for Ethernet port:

0 (package type of channel number 1)..……..edd

TxPkts (transmitted packets)……...1

RxPkts (received packets)…..……0/0 (correct/error)

Explanation:

Information for ADSL port:

0 (package type of channel number 1)…….ip

TxPkts (transmitted packets)……56

RxPkts (received packets)……...37/0 (correct/error)

TxVPI/VCI (transmitted VC)……..……8/35

RxVPI/VCI (received VC)……..8/35

MANAGE

Enter to MANAGE configuration menu. More commands under MANAGE menu, see detail after.

Syntax:	manage
Parameters:	

Example: ATUR110R> manage

MODE

Select the modem as Bridge or router mode

Syntax:	mode
Parameters:	The default is bridge mode.
Example:	>> manage
Response:	Please select bridge or router:(b/r,b)r Current mode is router ATUR110R>

PAT

Enter to PAT configuration menu. More commands under PAT menu, see detail after.

Syntax:	pat
Parameters:	
Example:	ATUR110R> pat

PING

Ping a specific IP address for testing purpose

Syntax:	ping <ipaddress>
Parameters:	ipaddress: IP address, in the format of 4 decimals separated by dots
Example1:	ATUR110R> ping xxx.xxx.xxx.xxx
Response:	ATUR110R> ip: ping - reply received from xxx.xxx.xxx.xxx
Explanation:	Successful ping
Example2:	ATUR110R> ping 299.999
Response:	ATUR110R> Invalid IP
Explanation:	Invalid IP address
Example3:	ATUR110R> ping xxx.xxx.xxx.xxx
Response:	ATUR110R> ip: ping - no reply received
Explanation:	Wrong IP address
	If no reply received, the system will ping same IP address continually until the system receiving reply or pressing "Esc" to break.

PPPOA

Enter to PPPOA menu. More commands under PPPOA menu, see detail after.

Syntax:	pppoa
Parameters:	
Example:	ATUR110R> pppoa

QUICK

Enter VC with RFC1483/IPoA/PPPoA mode by an interactive user interface

Syntax:	Quick

Parameters:

Example: ATUR110R> quick

Response: R1483(r)/ IPoA(i)/ PPPoA(p): r**[Enter]**

0 PVC existed, 8 PVCs available.

Ethernet IP: 210.62.2.185**[Enter]**
Subnet mask (0.0.0.0): **[Enter]**
VPI(0-1023): 5**[Enter]**
VCI(1-65535): 35**[Enter]**
PCR(0-800): 640**[Enter]**
WAN IP : 210.62.6.185**[Enter]**
Add another PVC ? (y/n): n**[Enter]**

Configuration

MODE: Router
FUNCTION: R1483
Ethernet IP: 210.62.2.185
Subnet Mask: 255.255.255.0

#	VPI	VCI	PCR	WAN IP
1:	5	35	640	210.62.6.185

Preserve the configuration (y/n): n**[Enter]**
Continue quick (y/n): y**[Enter]**

R1483(r)/ IPoA(i)/ PPPoA(p): i**[Enter]**
0 PVC existed, 8 PVCs available.

Ethernet IP (210.62.2.134) : **[Enter]**
Subnet mask (255.255.255.0) : **[Enter]**
VPI(0-4095): 8**[Enter]**
VCI(1-65535): 32**[Enter]**
WAN IP : 210.62.5.183**[Enter]**
Dynamic (d) / Static (s): d**[Enter]**
RIP1(r1)/ RIP2(r2)/ RIP 1&2(r1&2): r1**[Enter]**
Add another PVC ? (y/n): y**[Enter]**
VPI(0-4095): 2**[Enter]**
VCI(1-65535): 32**[Enter]**
WAN IP : 210.62.5.187**[Enter]**

Dynamic (d) / Static (s): s**[Enter]**

Gateway : 210.62.5.175**[Enter]**

Add another PVC ? (y/n): n**[Enter]**

Setup Configuration

FUNCTION: IPOA

Ethernet IP: 210.62.2.134

Subnet Mask: 255.255.255.0

#	VPI	VCI	WAN IP	RIP	Gateway IP
1:	8	32	210.62.5.183	1	
2:	2	32	210.62.5.187		210.62.5.175

Preserve the configuration (y/n) : n**[Enter]**

Continue quick (y/n) : y**[Enter]**

R1483(r)/ IPoA(i)/ PPPoA(p): p**[Enter]**

0 PVC existed, 1 PVC available.

Ethernet IP (210.62.2.134) : **[Enter]**

Subnet mask (255.255.255.0) : **[Enter]**

VPI(0-4095): 6**[Enter]**

VCI(1-65535): 33**[Enter]**

Authentication(PAP(p)/CHAP(c)/None(n)): p**[Enter]**

User name: xavi**[Enter]**

Password: **********[Enter]**

Setup Configuration

FUNCTION: PPPOA

Ethernet IP: 210.62.2.134

Subnet Mask: 255.255.255.0

#	VPI	VCI	AUTH	USERID
1:	6	33	PAP	xavi

Preserve the configuration (y/n) : n

Continue quick (y/n) : n

Configuration will have no effect until after save and restart.

R1483

Enter to R1483 menu. More commands under R1483 menu, see detail after.

Syntax:	r1483
Parameters:	

Example: ATUR110R> r1483

RESTART

Reboot the ADSL modem

Syntax:	restart
Parameters:	

Example: ATUR110R> restart

Response:
```
SDRAM size = 0x800000, type = 0x5
NPnNo boot information block
Booting...

System starts...

ADSL Line Establishing
```

RTABLE

Enter to RTABLE menu. More commands under RTABLE menu, see detail after.

Syntax:	rtable
Parameters:	

Example: ATUR110R> rtable

SAVE

Save the configuration into flash memory, and restart modem

Syntax:	save
Parameters:	

Example: ATUR110R> save

Response:
```
Saving configuration...Configuration saved.
Updating flash filing system ...
SDRAM size = 0x800000, type = 0x5
NPnNo boot information block
Booting...


System starts...


ADSL Line Establishing
```

ATUR110R>

Save configuration then restart modem

SHOW

Display the configuration of each enabled VC and Ethernet

Syntax:	show [lan]|[wan]
Parameters:	

Example: ATUR110R> show lan

Response: Ethernet ip: 192.168.2.1

Subnet mask: 255.255.255.0

FullDuplex: Disable

DHCP Server setup:

range1: 0.0.0.0 to 0.0.0.0

max lease time: 86400

DHCP current setting: disable.

DHCP ineffective setting: disable.

Explanation: **Information for Local Ethernet IP, subnet mask**

Ethernet IP (local)……..…192.168.2.1

Subnet mask……..255.255.255.0

Full Duplex……Disable

Information for DHCP server setting:

Range1 (First IP to last IP address).….0.0.0.0 to 0.0.0.0

Max lease time (infinite)..……..……86400 seconds

ATUR110R> show wan

Example 2:

Response: RFC1483 setting:

FUNCTION	VPI/VCI	CLASS	PCR(KBits)	Wan IP
Rfc1483	8/35	ubr	640	210.62.2.183

IPoA setting:

FUNCTION	VPI/VCI	CLASS	PCR	Wan IP	GatewayIP
IPoA	8/32	ubr	640	210.62.2.195	210.62.2.185
IPoA	5/33	ubr	640	210.62.2.198	210.62.2.185

PPPoA setting:

Function	VPI/VCI	CLASS	PCR(KBits)	UserID/Authentication

PPPoA 2/32 ubr 640 xavi/CHAP

LLC=Disable Echo interval time: 60 s

PAT enabled interface:

Interface IP address

IPoA 210.62.2.195

PPPoA ???.???.???.???

PAT incoming table:

No.	i/f name|WanIP	Port/Protocol	Server IP
1	pppoa	434/udp	192.62.2.134
2	210.62.2.195	232/tcp	192.62.2.166

Routing Table:

No.	Destination IP	SubMask	Gateway IP
1	192.62.2.0	255.255.255.0	210.62.2.135

Effective routing table:

Routing table is empty

Explanation:

Information for RFC1483 setting:

Function (Protocol in use)……RFC1483

VPI/VCI (Connected VC channel)……...8/35

CLASS (define QoS on the ATM network)……ubr

PCR (Peak Cell Rate)…..……640 (cells per second)

Wan IP (R1483 routing IP)…….210.62.2.183

(The default RFC1483 setting is Empty)

Information for IPoA setting:

Function (Protocol in use)……IPoA

VPI/VCI (Connected VC channel)……8/32

CLASS (define QoS on the ATM network)……ubr

PCR (Peak Cell Rate)…..……640 (cells per second)

Wan IP (WAN IP address)……210.62.2.195

GatewayIP (Gateway IP address)……210.62.2.185

(The default IPoA setting is Empty)

Information for PPPoA setting:

Function (Protocol in use)……PPPoA

VPI/VCI (Connected VC channel)……2/32

CLASS (define QoS on the ATM network)……ubr

PCR (Peak Cell Rate)…..……640 (cells per second)

UserID (User ID)……xavi

Authentication (Authentication protocol)……..CHAP

(CHAP: challenge handshake authentication protocol, PAP: password authentication, none: neither)

LLC (Logic link control)…….disable

Echo interval time……..……60 seconds

(The default PPPoA setting is Empty)

Information for PAT each enabled interface:

IPoA (protocol in use and enabled interface IP address)……..……..210.62.2.195

PPPoA (protocol in use and enabled interface IP address)…….……???.???.???.???
(Before get IP from service provider)

(The default PAT enabled interface is Empty)

Information for PAT incoming table:

No. (PAT table number, assign by system)……..1

I/f name|Wanip (enabled interface and WAN IP address)……pppoa

Port/Protocal (Port number and transmitted Protocol in use)…….434/udp

Server IP (global server IP address)……192.62.2.134

(The default PAT incoming table is Empty)

Information for routing table:

No. (routing table number, assign by system)……1

Destination IP……...192.62.2.0

SubMask (subnet mask)……..…255.255.255.0

Gateway IP (IPoA gateway IP or R1483 Wan IP)…….210.62.2.135

VER

Display the software version number

Syntax:	Ver
Parameters:	

Example: ATUR110R> ver

Response: Version : 2.21MJ

(2.21MJ-H50.1302-F2210.0406A 28/Oct/2000 12:21)

ADSL MENU COMMANDS:

Please refer to Bridge mode CLI

IPOA MENU COMMANDS

Delwanip setqos setwanip show

DELWANIP

Disable VC by giving a VPI and VCI numbers defined by ***setwanip*** *command previously. (User can set up to 8 PVC in IPoA configuration)*

Syntax:	delwanip <all>|[<vpi>/]<vci>
Parameters:	"all": delete all routing information
	vpi: decimal value of VPI number, 0 to 1023
	vci: decimal value of VCI number, 1 to 65535
Example:	ipoa> delwanip 1/32
	Disable VC=1/32 in configuration setting.

SETQOS

Configure each enabled VC in IPoA that should use UBR, CBR or VBR (define the Quality of Service on the ATM network), also set the speed of the ATM link in cells per second

Syntax:	setqos [<vpi>/]<vci> <ubr|cbr|vbr(nrt)> <pcr>
Parameters:	vpi: decimal value of VPI number, 0 to 4095
	vci: decimal value of VCI number, 1 to 65535
	(vpi, vci defined by setwanip command previously)
	"ubr": Unspecified Bit Rate
	"cbr": Constant Bit Rate
	"vbr": Variable Bit Rate
	pcr: Peak Cell Rate, 0 to 800 cells per second
Example:	ipoa> setqos 1/32 ubr 640
	Configure 1/32 VC using UBR and 640 cells per second for the connection.

SETWANIP

Enable a VC by giving a VPI and VCI numbers, also assign a WAN IP and gateway IP address

Note: *wanip and gatewayip must be in the same subnet mask*

Syntax:	setwanip [<vpi>/]<vci> <wanip> <gatewayip>

Parameters:	vpi: decimal value of VPI number, 0 to 4095 vci: decimal value of VCI number, 1 to 65535 wanip: WAN IP address, in the format of 4 decimals separated by dot gatewayip: gateway IP address, in the format of 4 decimals separated by dot
Example:	ipoa> setwanip 1/32 192.168.2.34 192.168.2.58 *Configure VPI=1, VCI=32, WAN IP=192.168.2.34, and gateway IP=192.168.2.58*

SHOW

Display the configuration of IPoA routing setting.

Syntax:	Show
Parameters:	
Example:	ipoa> show
Response:	IPoA setting:

FUNCTION	VPI/VCI	CLASS	PCR(KBits)	WanIP	GatewayIP
IPoA	8/32	ubr	640	210.62.2.195	210.62.2.185

Explanation: Information for IPoA setting:

Function (Protocol in use)……IPoA

VPI/VCI (Connected VC channel)……8/32

CLASS (define QoS on the ATM network)……ubr

PCR (Peak Cell Rate)……640 (cells per second)

Wan IP (WAN IP address)……210.62.2.195

GatewayIP (Gateway IP address)……210.62.2.185

(The default IPoA setting is Empty)

LAN MENU COMMANDS

dhcpserver fullduplex setdhcp setip

show

DHCPSERVER

Configure a range of IP addresses that are associated with subnet mask used for DHCP server

Notice: *the IP addresses should be in the same subnet mask*

Syntax:	dhcpserver <range1 startIP> <range1 endIP> [<range2 startIP> <range2 endIP>] [<max-lease-time>]
Parameters:	range1 startIP: the first IP address in range 1 for a particular subnetwork, in the format of 4 decimals separated by dot

	range1 endIP: the last IP address in range 1 for a particular subnetwork, in the format of 4 decimals separated by dot range2 startIP: the first IP address in range 2 for a particular subnetwork, in the format of 4 decimals separated by dot range2 endIP: the last IP address in range 2 for a particular subnetwork, in the format of 4 decimals separated by dot max-lease-time: maximum lease time, the default is 86400 seconds
Example:	lan> dhcpserver 192.168.2.32 192.168.2.126 *Setup IP address of range 1 from 192.168.2.32 to 192.168.2.126*

Setup Domain-Name-Servers IP addresses available to the client

Syntax:	dhcpserver dns <dns ip1> [<dns ip2>]
Parameters:	dns ip1: Domain-name-servers IP address 1 dns ip2: Domain-name-servers IP address 2
Example:	lan> dhcpserver dns 192.168.2.32 *Setup domain-name-servers IP address= 192.168.2.32*

FULLDUPLEX

Enable or disable full duplex operation

Syntax:	fullduplex <disable>|<enable>
Parameters:	“disable”: disable full duplex (half duplex operation) “enable”: enable full duplex operation
Example:	> lan> fullduplex enable *Enable full duplex operation*

SETDHCP

Select DHCP mode 0f the unit

*(Note: user has to set **dhcpserver** command in advance)*

Syntax:	setdhcp [server|disable]
Parameters:	“server”: Select unit as server mode “disable”: disable DHCP
Example:	lan> setdhcp server *Select the unit as DHCP server mode*

SETIP

Setup IP address, and subnet mask for the Ethernet LAN connection

Syntax:	setip <etherip> [subnet mask]

Parameters:	etherip: Ethernet IP address, in the format of 4 decimals separated by dot subnet mask: Subnet mask, the default is 255.255.255.0
Example:	lan> setip 192.168.2.32 *Set a new IP address = 192.168.2.32 and* *Subnet mask is default = 255.255.255.0*

SHOW

Display the current configuration of Ethernet and the DHCP setting.

Syntax:	Show
Parameters:	
Example:	lan> show
Response:	Ethernet ip: 192.168.2.1 Subnet mask: 255.255.255.0 FullDuplex: Disable DHCP Server setup: range1: 0.0.0.0 to 0.0.0.0 max lease time: 86400 DHCP current setting : disable. DHCP ineffective setting : disable.
Explanation:	Information for Local Ethernet IP, subnet mask Ethernet IP (local)……..192.168.2.1 Subnet mask……..255.255.255.0 Full Duplex……..Disable Information for DHCP server setting: Range1 (First IP to last IP address)…..0.0.0.0 to 0.0.0.0 Max lease time (infinite)..…….……86400 seconds

MANAGE MENU COMMANDS

SETPASS

Change password

Syntax:	setpass
Parameters:	Up to 20 alphanumeric characters. Upper case and lower case are different numbers.

Example 1: *For enabling a new password*

manage> setpass

Response: password disabled

New Password: ****

Confirm password again: ****

Password has been changed.

Explanation: Saving configuration...Configuration saved.

You will be asked to key in new password and confirm the new password again.

Example 2:

For changing old password:

Response: manage> setpass

Old Password: ****

New Password (press ENTER to disable): ****

Confirm password again: ****

Password has been changed

Explanation: Saving configuration...Configuration saved.

You will be asked to key in old password. Type the new password and confirm the new password again.

Example 3:

For disabling old password:

Response: manage> setpass

Old Password: ********

New Password (press ENTER to disable):

Are you sure to disable password (y/n)?y

The password has been disabled

Explanation: Saving configuration...Configuration saved.

You will be asked to key in old password and press enter to disable old password and confirm it again.

PAT MENU COMMAND

addpatin delpatin setpat show

ADDPATIN

This command is used to enable a local IP address as a server for a particular protocol to allow WAN access

(Before setting "ADDPANIN", user must configure "SETPAT" to activate a specific PAT setting)

Syntax:	addpatin <pppoa|wanip> <port>/<udp|tcp> <serverip>
Parameters:	"pppoa" or wanip: select one of link protocol to configure PAT address. (wanip: WAN IP address, defined by ipoa

	-> setwayip command previously, in the format of 4 decimals separated by dot) port: port number “udp” or “tcp”: choose one of transmitted protocol to send packets serverip: local (server) IP address, in the format of 4 decimals separated by dot
Example:	pat> addpatin pppoa 434 udp 192.168.2.134 *Configure local IP address 192.168.2.134 port number 434 as a UDP server to allow WAN access.*

DELPATIN

*Delete PAT address defined by **ADDPATIN** command previously*

Syntax:	delpatin <all>|<number>
Parameters:	“all”: delete all PAT address number: one decimals, using show command to check this number, assign by system when the user add PAT address
Example:	pat> delnatin all *Delete all PAT address configuration*

SETPAT

Enable or disable a specific PAT interface by giving routing protocol or WAN IP address

Syntax:	setpat <pppoa|wanip> <e>nable|<d>isable
Parameters:	“pppoa” or wanip: select one of link protocol to enable or disable PAT function. (wanip: WAN IP address, defined by ipoa -> setwayip command previously, in the format of 4 decimals separated by dot)
Example:	pat> setpat pppoa enable *Enable PPPoA PAT setting*

SHOW

Display the PAT configuration

Syntax:	show
Parameters:	
Example:	pat> show
Response:	PAT enabled interface: Interface IP address IPoA 210.62.2.195 PPPoA ???.???.???.??? PAT incoming table

No.	i/f name|WanIP	Port/Protocol	Server IP
1	pppoa	434/udp	192.62.2.134
2	210.62.2.195	232/tcp	192.62.2.166

Explanation:

Information for PAT each enabled interface:

IPoA (protocol in use and enabled interface IP address)……..……..210.62.2.195

PPPoA (protocol in use and enabled interface IP address)……???.???.???.???
(Before get IP from service provider)

(The default PAT enabled interface is Empty)

Information for PAT incoming table:

No. (PAT table number, assign by system)……..1

I/f name|Wanip (enabled interface or WAN IP address)……pppoa

Port/Protocol (Port number and transmitted Protocol in use)…….434/udp

Server IP (global server IP address)……192.62.2.134

(The default PAT incoming table is Empty)

PPPOA MENU COMMAND

adduser	chpass	deluser	echo
setllc	setqos	show	

ADDUSER

Enable a VC by giving a VPI and VCI numbers, also Configure user ID and authentication protocol for security negotiation

(Note: After the unit gets the PPPoA wanip from ISP router, it will establish a default routing table automatically)

Syntax:	adduser [<vpi>/]<vci> <userid> <chap|pap>
Parameters:	vpi: decimal value of VPI number, 0 to 1023
	vci: decimal value of VCI number, 1 to 65535
	userid: User ID
	"chap" and "pap": choose authentication protocol, the default is none. (chap: challenge handshake authentication protocol, pap: password authentication protocol)

Example: pppoa> adduser 2/32 xavi chap

Response: New Password: ********

Confirm password again: ********

User account added successfully.

Set vpi=2, vci=32, user ID=xavi, using CHAP authentication protocol

CHPASS

Change user password

*(Note: user has to set **adduser** command in advance)*

Syntax:	chpass
Parameters:	Up to 20 alphanumeric characters. Upper case and lower case are different numbers.

Example 1: *For changing old password:*

pppoa> chpass

Response: Old Password: ****

New Password: ****

Confirm password again: ****

Password has been changed

Explanation: *You will be asked to key in old password. Type the new password and confirm the new password again.*

Example 2: *No user ID and password:*

pppoa> chpass

Response: No pppoa user ID

DELUSER

*Delete User ID configuration, defined by **adduser** previously.*

Syntax:	deluser
Parameters:	

Example: pppoa> deluser

Delete user ID configuration

ECHO

Enable or disable LCP echo that was used to confirm the presence of an open PPP connection by giving the number of seconds between echo requests.

*(Note: user has to set **adduser** command in advance)*

Syntax:	echo <interval time>
Parameters:	interval time: 0 to 65535 seconds, the number of seconds between echo request, the default is 60 second (if 0 is specified, the function is disabled).

Example: > pppoa> echo 35

Enable LCP echo by sending echo request every 35 seconds

SETLLC

Enable or disable logic link control (LLC)

*(Note: user has to set **adduser** command in advance)*

Syntax:	setllc <Enable>|<Disable>
Parameters:	“Enable” or “disable”: enable or disable LLC, the default is disable.

Example: > pppoa> setllc e

Enable LLC

SETQOS

Configure each enabled PPPoA VC the Quality of Service on ATM networks by choosing UBR or CBR, also set the speed of the ATM link in cells per second.

*(Note: user has to set **adduser** command in advance)*

Syntax:	setqos [<vpi>/]<vci> <ubr|cbr> <pcr>
Parameters:	Vpi: decimal value of VPI number, 0 to 1023.
	vci: decimal value of VCI number, 1 to 65535.
	(vpi, vci defined by **adduser** command previously)
	“ubr”: Unspecified Bit Rate
	“cbr”: Constant Bit Rate
	pcr: Peak Cell Rate, 0 to 800 cells per second

Example: pppoa> setqos 1/32 ubr 640

Configure 1/32 VC using UBR and 640 cells per second for the connection.

SHOW

Display the configuration of PPPoA routing setting.

Syntax:	Show
Parameters:	

Example: pppoa> show

Response: PPPoA dial out setting:

Function	VPI/VCI	CLASS	PCR(KBits)	UserID/Authentication
PPPoA	2/32	ubr	640	xavi/CHAP

LLC=Disable Echo interval time: 60 s

Explanation: Information for PPPoA setting:

Function (Protocol in use)……PPPoA

VPI/VCI (Connected VC channel)……2/32

CLASS (define QoS on the ATM network)……ubr

PCR (Peak Cell Rate)……640 (cells per second)

UserID (User ID)……xavi

Authentication (Authentication protocol)……..CHAP

LLC (Logic link control)……disable

Echo interval time……..……60 seconds

(The default PPPoA setting is Empty)

R1483-LEVEL COMMAND

Delwanip setqos setwanip show

DELWANIP

*Disable VC by giving a VPI and VCI numbers defined by **setwanip** command previously. (User can set up to 8 PVC in IPoA configuration)*

Syntax:	delwanip <all>|[<vpi>/]<vci>
Parameters:	"all": delete all routing information
	vpi: decimal value of VPI number, 0 to 1023
	vci: decimal value of VCI number, 1 to 65535
	(vpi, vci defined by setwanip command previously)
Example:	r1483> delwanip 1/32
	Disable VC=1/32 in configuration setting.

SETQOS

Configure each enabled R1483 VC the Quality of Service on ATM networks by choosing UBR, CBR or VBR, also set the speed of the ATM link in cells per second.

Syntax:	setqos [<vpi>/]<vci> <ubr|cbr|vbr(nrt)> <pcr>
Parameters:	vpi: decimal value of VPI number, 0 to 1023.
	vci: decimal value of VCI number, 1 to 65535.
	(vpi, vci defined by setwanip command previously)
	"ubr": Unspecified Bit Rate
	"cbr": Constant Bit Rate
	"vbr": Variable Bit Rate
	pcr: Peak Cell Rate, 0 to 800 cells per second
Example:	r1483> setqos 1/32 ubr 640
	Configure 1/32 VC using UBR and 640 cells per second for the connection.

SETWANIP

Enable an r1483 routing VC by giving a VPI and VCI numbers, also assign a WAN IP for routing

Syntax:	setwanip [<vpi>/]<vci> <wanip>
Parameters:	vpi: decimal value of VPI number, 0 to 1023
	vci: decimal value of VCI number, 1 to 65535
	wanip: WAN IP address, in the format of 4 decimals separated by dot
Example:	ipoa> setwanip 1/32 192.168.2.34
	Configure VPI=1, VCI=32, WAN IP=192.168.2.34

SHOW

Display the configuration of r1483 setting.

Syntax:	Show
Parameters:	

Example: r1483> show

Response: RFC1483 setting:

FUNCTION	VPI/VCI	CLASS	PCR(KBits)	Wan IP
Rfc1483	8/35	ubr	640	210.62.2.183

Explanation: Information for RFC1483 setting:

Function (Protocol in use)……RFC1483

VPI/VCI (Connected VC channel)……...8/35

CLASS (define QoS on the ATM network)……ubr

PCR (Peak Cell Rate)……640 (cells per second)

Wan IP (R1483 routing IP)……210.62.2.183

(The default RFC 1483 setting is Empty)

RTABLE MENU COMMANDS:

Addiproute deliproute show

ADDIPROUTE

Configure a destination IP to a specific gateway IP at routing table

Note: *user has to configure gateway IP at > ipoa>* ***setwanip (gatewayip)*** *or > r1483>* ***setwanip (wanip)*** *command in advance*

Syntax:	addiproute <destip> [<submask>] <gatewayip>
Parameters:	destip: destination IP address, in the format of 4 decimals separated by dot submask: subnet mask, in the format of 4 decimals separated by dot gatewayip: Gateway IP address, in the format of 4 decimals separated by dot. Defined by ipoa → **setwanip (gatewayip)** or r1483 → **setwanip (wanip)** command previously.

Example: rtable> addiproute 192.168.2.126 255.255.255.0 210.62.2.135

Configure destination IP=192.169.2.145, subnet mask=255.255.255.0 and gateway IP=192.168.2.58

DELIPROUTE

Delete routing information defined by ***addiproute*** *command previously*

Syntax:	deliproute <all>|<number>
Parameters:	"all": delete all routing information in the routing table number: one decimals, using **show** command to check

	this number, assign by system when the user add routing table

Example: rtable> deliproute all

Delete all routing information in the routing table

SHOW

Display the routing table configuration

Syntax:	show
Parameters:	

Example 1: Before save:

rtable> show

Response: Routing Table:

No.	Destination IP	SubMask	Gateway IP
1	192.62.2.0	255.255.255.0	210.62.2.135

Effective routing table:

Routing table is empty

Example 2: After save:

rtable> show

Response: Routing Table:

No.	Destination IP	SubMask	Gateway IP
1	0.0.0.0	0.0.0.0	210.62.2.135
2	192.62.2.0	255.255.255.0	210.62.2.135

Effective routing table:

route add ipoa1 192.62.2.0 210.62.2.135 ff:ff:ff:00 1 # MAN via ipoa1

route add ipoa1 0.0.0.0 210.62.2.135 00:00:00:00 1 # MAN via ipoa1

Explanation: Information for routing table setting:

No. (routing table number, assign by system)……1

Destination IP……...192.62.2.0

SubMask (subnet mask)……..…255.255.255.0

Gateway IP……..…210.62.2.135

(Note: when user set destination IP: 192.168.2.126 Subnet mask: 255.255.255.0, then using show command to display the configuration the destination IP will change to 192.168.2.0 as a subnet internally.)

Appendix C. Network configuration

1. IPoA routing sample configuration

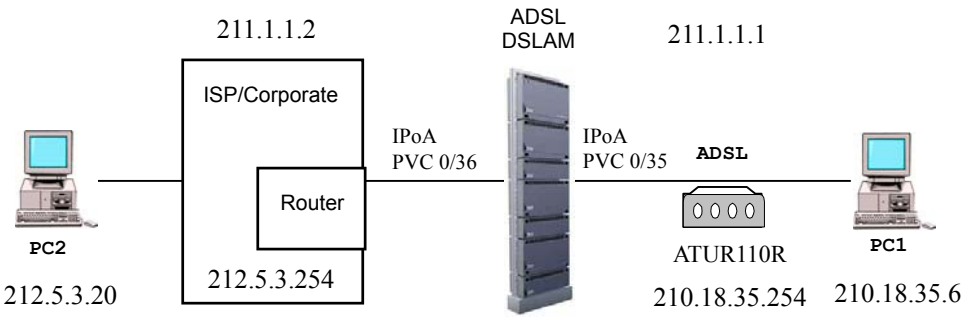


Figure 6: IPoA configuration figure

1.1 Information list:

LAN IP: 210.18.35.254

WAN IP: 211.1.1.1

IPoA PVC (VPI/VCI): 0/35

ISP Router LAN IP: 212.5.3.254

ISP Router WAN IP: 211.1.1.2

ISP Router IPoA PVC (VPI/VCI): 0/36

1.2 Type the following commands to obtain IPoA Routing configuration:

```
ATUR110R> lan
lan> setip 210.18.35.254
lan> home
ATUR110R> ipoa
ipoa> setwanip 35 211.1.1.1 211.1.1.2
ipoa> home
ATUR110R> show
Ethernet ip: 210.18.35.254
Subnet mask: 255.255.255.0
FullDuplex:Disable

DHCP Server setup:
range1: 0.0.0.0 to 0.0.0.0
max lease time: 86400

DHCP current setting : disable.
DHCP ineffective setting : disable.

RFC1483 setting:
FUNCTION     VPI/VCI       CLASS   PCR(KBits)   Wan IP

IPoA setting:
FUNCTION   VPI/VCI   CLASS   PCR(KBits)   Wan IP    GatewayIP
IPoA       0/35      ubr     640          211.1.1.1   211.1.1.2

PPPoA setting:
Function   VPI/VCI    CLASS   PCR(KBits)   UserID/Authentication

PAT enabled interface:
 Interface          IP address

PAT incoming table:
 No. i/f name|WanIP        Port/Protocal       Server IP

Routing Table:
 No. Destination IP       SubMask             Gateway IP
   1   0.0.0.0              0.0.0.0             211.1.1.2
```

effective routing table:

Routing table is empty

ATUR110R> save

Saving configuration...Configuration saved.

Updating flash filing system ...

SDRAM size = 0x800000, type = 0x5

NPnNo boot information block

Booting...

System starts...

ADSL Line Establishing

ATUR110R>

2. IPoA +PPPoA routing sample configuration

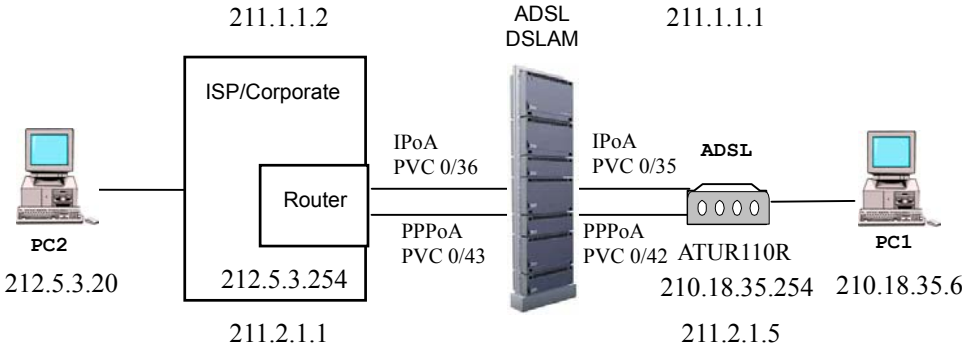


Figure 7: IPoA+PPPoA configuration figure

2.1 Information list:

LAN IP: 210.18.35.254

IPoA WAN IP: 211.1.1.1

IPoA PVC (VPI/VCI): 0/35

PPPoA WAN IP: 211.2.1.5 *(Assigned by ISP)*

PPPoA PVC (VPI/VCI): 0/42

User ID: user123 *(provided by ISP)*

User password: pass1234 *(provided by ISP)*

Authentication protocol: chap *(provided by ISP)*

ISP Router LAN IP: 212.5.3.254

ISP Router IPoA WAN IP: 211.1.1.2

ISP Router PPPoA WAN IP: 211.2.1.1

ISP Router IPoA PVC (VPI/VCI): 0/36

ISP Router PPPoA PVC (VPI/VCI): 0/43

(Note: when user establishes multi IPoA and PPPoA channel, it is necessary to set up routing table, also the ISP router have to set up the corresponding configuration)

2.2 Type the following commands to obtain IPoA +PPPoA Routing configuration:

ATUR110R> lan

lan> setip 210.18.35.254

lan> home

ATUR110R> ipoa

ipoa> setwanip 35 211.1.1.1 211.1.1.2

ipoa> home

ATUR110R> pppoa

pppoa> adduser 42 user123 chap

New Password:********

Confirm password again:********

User account added successfully.

pppoa> home

ATUR110R> rtable

rtable> addiproute 212.5.3.0 211.1.1.2

(Note: combine IP: 212.5.3.20 Subnet mask: 255.255.255.0 as 212.5.3.0)

rtable> home

ATUR110R> show

Ethernet ip: 210.18.35.254

Subnet mask: 255.255.255.0

FullDuplex:Disable

DHCP Server setup:

range1: 0.0.0.0 to 0.0.0.0

max lease time: 86400

DHCP current setting : disable.

DHCP ineffective setting : disable.

RFC1483 setting:

FUNCTION VPI/VCI CLASS PCR(KBits) Wan IP

IPoA setting:

FUNCTION	VPI/VCI	CLASS	PCR(KBits)	Wan IP	GatewayIP
IPoA	0/35	ubr	640	211.1.1.1	211.1.1.2

PPPoA setting:

Function	VPI/VCI	CLASS	PCR(KBits)	UserID/Authentication
PPPoA	0/42	ubr	640	user123/CHAP
	LLC=Disable	Echo interval time: 60 s		

PAT enabled interface:

Interface	IP address

PAT incoming table:

No.	i/f name|WanIP	Port/Protocal	Server IP

Routing Table:

No.	Destination IP	SubMask	Gateway IP
1	0.0.0.0	0.0.0.0	211.1.1.2
2	212.5.3.0	255.255.255.0	211.1.1.2

effective routing table:

Routing table is empty
ATUR110R> save

Saving configuration...Configuration saved.

Updating flash filing system ...

SDRAM size = 0x800000, type = 0x5

NPnNo boot information block

Booting...

System starts...

ADSL Line Establishing

ATUR110R>

3. IPoA +PAT routing sample configuration

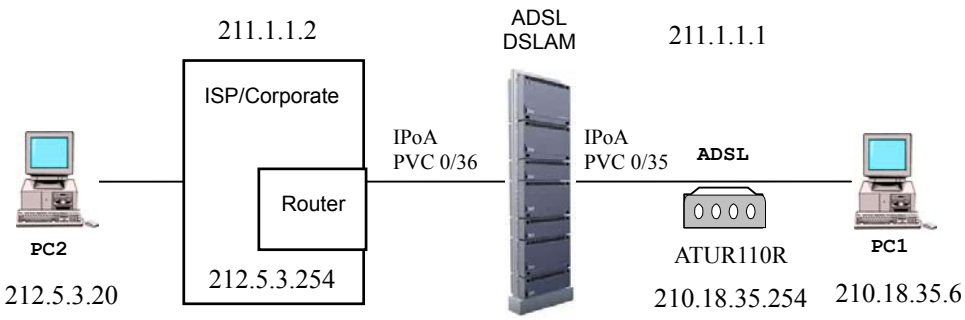


Figure 8: IPoA+PAT configuration figure

3.1 Information list:

LAN IP: 210.18.35.254

IPoA WAN IP: 211.1.1.1

IPoA PVC (VPI/VCI): 0/35

ISP Router LAN IP: 212.5.3.254

ISP Router IPoA WAN IP: 211.1.1.2

ISP Router IPoA PVC (VPI/VCI): 0/36

3.2 Type the following commands to obtain IPoA+PAT Routing configuration:

ATUR110R> lan

lan> setip 210.18.35.254

lan> home

ATUR110R> ipoa

ipoa> setwanip 35 211.1.1.1 211.1.1.2

ipoa> home

ATUR110R> pat

pat> setpat 211.1.1.1 e

pat> home

ATUR110R> show

Ethernet ip: 210.18.35.254

Subnet mask: 255.255.255.0

FullDuplex:Disable

DHCP Server setup:

range1: 0.0.0.0 to 0.0.0.0

max lease time: 86400

DHCP current setting : disable.

DHCP ineffective setting : disable.

RFC1483 setting:

FUNCTION VPI/VCI CLASS PCR(KBits) Wan IP

IPoA setting:

FUNCTION	VPI/VCI	CLASS	PCR(KBits)	Wan IP	GatewayIP
IPoA	0/35	ubr	640	211.1.1.1	211.1.1.2

PPPoA setting:

Function VPI/VCI CLASS PCR(KBits) UserID/Authentication

PAT enabled interface:

Interface	IP address
IPoA	211.1.1.1

PAT incoming table:

No. i/f name|WanIP Port/Protocal Server IP

Routing Table:

No.	Destination IP	SubMask	Gateway IP
1	0.0.0.0	0.0.0.0	211.1.1.2

effective routing table:

Routing table is empty

ATUR110R> save

Saving configuration...Configuration saved.

Updating flash filing system ...

SDRAM size = 0x800000, type = 0x5

NPnNo boot information block

Booting...

System starts...

ADSL Line Establishing

ATUR110R>

3.3

If user and network administrators who wish to allow WAN access to a Web server, FTP server, etc. on their local side user can use **pat** > **addpanin** command to enable a local IP address as a server for the WAN access. Type the following commands to obtain the configuration:

pat> setpat 211.1.1.1 enable

pat> addpatin 211.1.1.1 434/udp 210.18.35.10

pat> show

PAT enabled interface:

Interface	IP address
IPoA	211.1.1.1

PAT incoming table:

No.	i/f name|WanIP	Port/Protocal	Server IP
1	211.1.1.1	434/udp	210.18.35.10

pat>save

Saving configuration...Configuration saved.

Updating flash filing system ...

SDRAM size = 0x800000, type = 0x5

NPnNo boot information block

Booting...

System starts...

ADSL Line Establishing

ATUR110R>

IPoA+PPPoA+PAT routing configuration

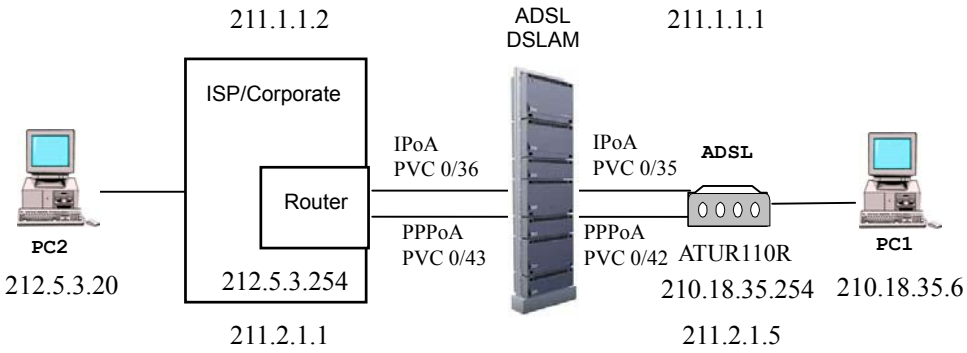


Figure 9: IPoA+PPPoA+PAT configuration figure

4.1 Information list:

If ISP router provides 2 channels, one is IPoA used for ISP to control ATUR110R, another one is PPPoA used for transmitting purpose. However, the outside network in the same subnet with ISP router will see the IP as 211.1.1.1 and in the different subnet will see the IP as 211.2.1.5

LAN IP: 210.18.35.254

IPoA WAN IP: 211.1.1.1

IPoA PVC (VPI/VCI): 0/35

PPPoA WAN IP: 211.2.1.5 *(Assigned by ISP)*

PPPoA PVC (VPI/VCI): 0/42

User ID: user123 *(provided by ISP)*

User password: pass1234 *(provided by ISP)*

Authentication protocol: chap *(provided by ISP)*

ISP Router LAN IP: 212.5.3.254

ISP Router IPoA WAN IP: 211.1.1.2

ISP Router PPPoA WAN IP: 211.2.1.1

ISP Router IPoA PVC (VPI/VCI): 0/36

ISP Router PPPoA PVC (VPI/VCI): 0/43

(Note: when user establishes multi IPoA and PPPoA channel, it is necessary to set up routing table, also the ISP router have to set up the corresponding configuration)

4.2 Type the following commands to obtain IPoA+PPPoA+PAT Routing configuration:

ATUR110R> lan

lan> setip 210.18.35.254

lan> home

ATUR110R> ipoa

ipoa> setwanip 35 211.1.1.1 211.1.1.2

ipoa> home

ATUR110R> pppoa

pppoa> adduser 42 user123 chap

New Password:********

Confirm password again:********

User account added successfully.

pppoa> home

ATUR110R> rtable

rtable> addiproute 212.5.3.0 211.1.1.2

rtable> home

ATUR110R> pat

pat> setpat 211.1.1.1 e

pat> setpat pppoa e

pat> addpatin 211.1.1.1 23/tcp 210.18.35.254

(*Configure LAN IP 192.168.2.134 port number 434 as a TCP server to allow WAN access)*

pat> home

ATUR110R> show

Ethernet ip: 210.18.35.254

Subnet mask: 255.255.255.0

FullDuplex:Disable

DHCP Server setup:

range1: 0.0.0.0 to 0.0.0.0

max lease time: 86400

DHCP current setting : disable.

DHCP ineffective setting : disable.

RFC1483 setting:

FUNCTION VPI/VCI CLASS PCR(KBits) Wan IP

IPoA setting:

FUNCTION	VPI/VCI	CLASS	PCR(KBits)	Wan IP	GatewayIP
IPoA	0/35	ubr	640	211.1.1.1	211.1.1.2

PPPoA setting:

Function	VPI/VCI	CLASS	PCR(KBits)	UserID/Authentication
PPPoA	0/42	ubr	640	user123/CHAP

LLC=Disable Echo interval time: 60 s

PAT enabled interface:

Interface	IP address
IPoA	211.1.1.1
PPPoA	???.???.???.???

PAT incoming table:

No.	i/f name|WanIP	Port/Protocal	Server IP
1	211.1.1.1	23/tcp	210.18.35.254

Routing Table:

No.	Destination IP	SubMask	Gateway IP
1	0.0.0.0	0.0.0.0	211.1.1.2
2	212.5.3.0	255.255.255.0	211.1.1.2

effective routing table:

Routing table is empty

ATUR110R> save

Saving configuration...Configuration saved.

Updating flash filing system ...

SDRAM size = 0x800000, type = 0x5

NPnNo boot information block

Booting...

System starts...

ADSL Line Establishing

ATUR110R>

5. DHCP configuration

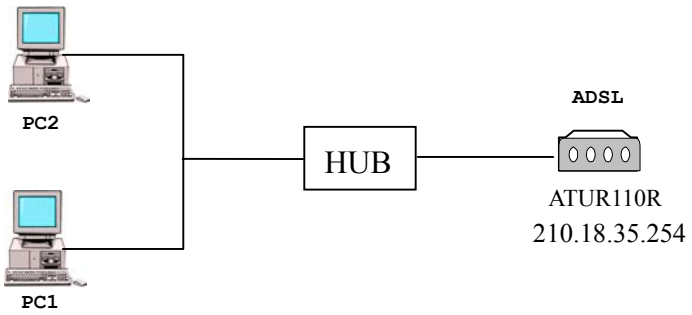


Figure 10: DHCP configuration figure

5.1 Information list

LAN IP: 210.18.35.254

Range of IP addresses used for DHCP server: 210.18.35.1 to 210.18.35.50

DNS IP address 1 available to the client: 210.65.18.1

DNS IP address 2 available to the client: 210.65.18.20

5.2 Type the following commands to obtain DHCP configuration:

lan> setip 210.18.35.254

lan> dhcpserver 210.18.35.1 210.18.35.50

DHCP Mode: Server.

lan> dhcpserver dns 210.65.18.1 210.65.18.20

DNS setup:

First: 210.65.18.1
Second:210.65.18.20
lan> setdhcp server
DHCP Mode: Server.
range1:210.18.35.1 to 210.18.35.50
range2:0.0.0.0 to 0.0.0.0
max lease time:86400
DNS1:210.65.18.1
DNS2:210.62.18.20
lan> show
Ethernet ip: 210.18.35.254
Subnet mask: 255.255.255.0
FullDuplex:Disable

DHCP Server setup:
range1: 210.18.35.1 to 210.18.35.50
max lease time: 86400
DNS: 210.65.18.1 SecDNS: 210.65.18.20

DHCP current setting : disable.
DHCP ineffective setting : Server.
lan> home
ATUR110R> save
Saving configuration...Configuration saved.
Updating flash filing system ...
SDRAM size = 0x800000, type = 0x5
NPnNo boot information block
Booting...

System starts...

ADSL Line Establishing
ATUR110R>